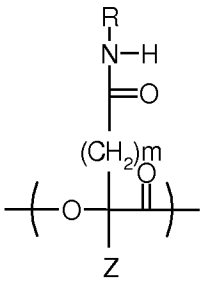
B. Claims

The following is a complete listing of the claims, and replaces all earlier versions and listings.

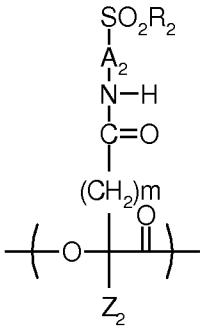
1. (Currently Amended) A polyhydroxyalkanoate comprising at least a unit represented by a chemical formula (1) within a molecule:



(1),

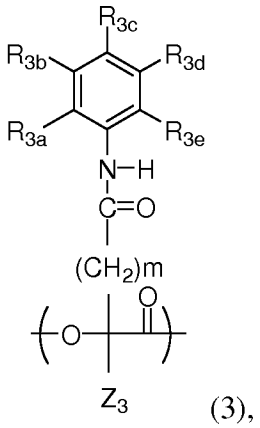
wherein R represents $-A_1-SO_2R_1$; R_1 represents OH, a halogen atom, ONa, OK or OR_{1a}; R_{1a} and A_1 each independently represents a group having a substituted or unsubstituted aliphatic hydrocarbon structure, a substituted or unsubstituted aromatic ring structure or a substituted or unsubstituted heterocyclic structure; m represents an integer selected from ~~0-8~~ 1-8; Z represents a linear or branched alkyl group, an aryl group or an aralkyl group substituted with an aryl group; and in case plural units are present, R, R_1, R_{1a}, A_1, m and Z ~~have the aforementioned meanings~~are selected independently for each unit.

2. (Currently Amended) The polyhydroxyalkanoate according to claim 1, comprising, as the unit represented by the chemical formula (1), at least a unit represented by a chemical formula (2), a chemical formula (3), a chemical formula (4A) or (4B), within a molecule:



(2),

wherein R_2 represents OH, a halogen atom, ONa, OK or OR_{2a}; R_{2a} represents a linear or branched alkyl group with 1 to 8 carbon atoms or a substituted or unsubstituted phenyl group; A_2 represents a linear or branched alkylene group with 1 to 8 carbon atoms; m represents an integer selected from ~~0 8~~ 1-8; Z_2 represents a linear or branched alkyl group, an aryl group or an aralkyl group substituted with an aryl group; and in case plural units are present, A_2, R_2, R_{2a}, m and Z_2 ~~have the aforementioned meanings~~are selected independently for each unit;



(3),

wherein:

each of R_{3a}, R_{3b}, R_{3c}, R_{3d} and R_{3e} ~~each~~ independently represents SO_2R_{3f} ~~(R_{3f} representing OH, a halogen atom, ONa, OK or OR_{3f1} (R_{3f1} representing a linear or branched~~

~~alkyl group with 1 to 8 carbon atoms or a substituted or unsubstituted phenyl group))~~, a hydrogen atom, a halogen atom, an alkyl group with 1 - 20 carbon atoms, an alkoxy group with 1 - 20 carbon atoms, an OH group, an NH_2 group, an NO_2 group, $COOR_{3g}$ ~~(R_{3g} representing a H atom, a Na atom or a K atom)~~, an acetamide group, an OPh group, ~~a~~ an NHPh group, a CF_3 group, a C_2F_5 group or a C_3F_7 group ~~(Ph indicating a phenyl group)~~, of which at least one is SO_2R_{3f};

m represents an integer selected from ~~0—8~~ 1-8; Z_3 represents a linear or branched alkyl group, an aryl group or an aralkyl group substituted with an aryl group; and

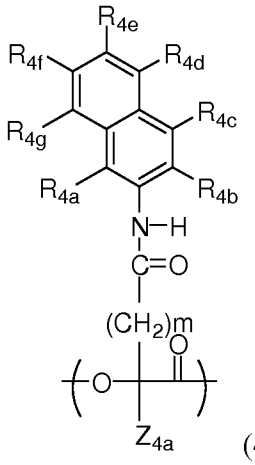
in case plural units are present, R_{3a}, R_{3b}, R_{3c}, R_{3d}, R_{3e}, R_{3f}, R_{3f1}, R_{3g}, m and Z_3 ~~have the aforementioned meanings~~are selected independently for each unit,

where R_{3f} is OH, a halogen atom, ONa, OK or OR_{3f1};

R_{3f1} is a linear or branched alkyl group with 1 to 8 carbon atoms or a substituted or unsubstituted phenyl group;

R_{3g} is H, Na or K; and

Ph is a phenyl group;



(4A),

wherein:

each of R_{4a}, R_{4b}, R_{4c}, R_{4d}, R_{4e}, R_{4f} and R_{4g} ~~each~~ independently represents SO_2R_{4o} ~~(R_{4o} representing OH, a halogen atom, ONa, OK or OR_{4o1} (R_{4o1} representing a linear or branched alkyl group with 1 to 8 carbon atoms or a substituted or unsubstituted phenyl group))~~, a hydrogen atom, a halogen atom, an alkyl group with 1 - 20 carbon atoms, an alkoxy group with 1 - 20 carbon atoms, an OH group, an NH_2 group, an NO_2 group, $COOR_{4p}$ ~~(R_{4p} representing a H atom, a Na atom or a K atom)~~, an acetamide group, an OPh group, an NHPh group, a CF_3 group, a C_2F_5 group or a C_3F_7 group ~~(Ph indicating a phenyl group)~~, of which at least one is SO_2R_{4o};

m represents an integer selected from ~~0—8~~ 1-8;

Z_{4a} represents a linear or branched alkyl group, an aryl group or an aralkyl group substituted with an aryl group; and

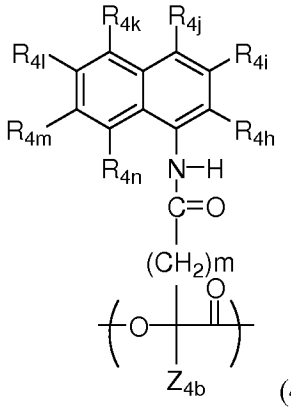
in case plural units are present, R_{4a}, R_{4b}, R_{4c}, R_{4d}, R_{4e}, R_{4f}, R_{4g}, R_{4o}, R_{4o1}, R_{4p}, m and Z_{4a} ~~have the aforementioned meanings~~are selected independently for each unit,

where R_{4o} is OH, a halogen atom, ONa, OK or OR_{4o1};

R_{4o1} is a linear or branched alkyl group with 1 to 8 carbon atoms or a substituted or unsubstituted phenyl group;

R_{4p} is H, Na or K; and

Ph is a phenyl group;



(4B),

wherein:

each of R_{4h}, R_{4i}, R_{4j}, R_{4k}, R_{4l}, R_{4m} and R_{4n} ~~each~~ independently represents SO_2R_{4o} ~~(R_{4o} representing OH, a halogen atom, ONa, OK or OR_{4o1} (R_{4o1} representing a linear or branched alkyl group with 1 to 8 carbon atoms or a substituted or unsubstituted phenyl group))~~, a hydrogen atom, a halogen atom, an alkyl group with 1 - 20 carbon atoms, an alkoxy group with 1 - 20 carbon atoms, an OH group, an NH_2 group, an NO_2 group, $COOR_{4p}$ ~~(R_{4p} representing a H atom, a Na atom or a K atom)~~, an acetamide group, an OPh group, an NHPh group, a CF_3 group, a C_2F_5 group or a C_3F_7 group ~~(Ph indicating a phenyl group)~~, of which at least one is SO_2R_{4o};

m represents an integer selected from ~~0 – 8~~ 1-8;

Z_{4b} represents a linear or branched alkyl group, an aryl group or an aralkyl group substituted with an aryl group; and

in case plural units are present, R_{4h}, R_{4i}, R_{4j}, R_{4k}, R_{4l}, R_{4m}, R_{4n}, R_{4o}, R_{4o1}, R_{4p}, m and Z_{4b} ~~have the aforementioned meanings~~are selected independently for each unit,

where R_{4o} is OH, a halogen atom, ONa, OK or OR_{4o1};

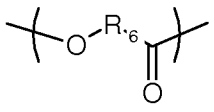
R_{4o1} is a linear or branched alkyl group with 1 to 8 carbon atoms or a substituted or unsubstituted phenyl group; and

R_{4p} is H, Na or a K;

Ph is a phenyl group.

3. (Cancelled)

4. (Currently Amended) The polyhydroxyalkanoate according to claim 1, further comprising a unit represented by a chemical formula (6) within a molecule:



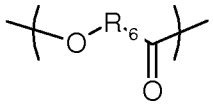
(6),

wherein R_6 represents a linear or branched alkylene with 1 - 11 carbon atoms, an alkyleneoxyalkylene group, ~~(each~~each alkylene group being, independently, with 1 - 2 carbon ~~atoms)~~atoms, or a linear or branched alkenyl group with 1 - 11 carbon atoms ~~or an alkylidene group with 1 - 5 carbon atoms,~~ which may be substituted with an aryl group; and in case plural units are present, R_6 ~~has the aforementioned meanings~~is selected

independently for each unit.

5-8. (Cancelled)

9. (Currently Amended) The polyhydroxyalkanoate according to claim 2, further comprising a unit represented by a chemical formula (6) within a molecule:



(6),

wherein R_6 represents a linear or branched alkylene with 1 - 11 carbon atoms, an alkyleneoxyalkylene group ~~(each~~, each alkylene group being, independently, with 1 - 2 carbon ~~atoms)~~atoms, or a linear or branched alkenyl group with 1 - 11 carbon atoms ~~or an alkylidene group with 1 - 5 carbon atoms~~, which may be substituted with an aryl group; and in case plural units are present, R_6 ~~has the aforementioned meanings~~is selected independently for each unit.

10. (Cancelled)